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NIC #31157
Online file: /ISI/<DCROCKER>NAOHTD.TXT

Telnet Output Horizontal Tab Disposition Option

1. Command name and code

NAOHTD 12 (Negotiate About Output Horizontal Tab Disposition)

2. Command meanings

In the following, we are discussing a simplex connection, as described in the NAOL and NAOP Telnet options.

IAC DO NAOHTD
The data sender requests or agrees to negotiate about output horizontal tab character disposition with the data receiver. In the case where agreement has been reached and in the absence of further subnegotiations, the data receiver is assumed to be handling output horizontal tab character considerations.

IAC DON'T NAOHTD
The data sender refuses to negotiate about output horizontal tab characters with the data receiver, or demands a return to the unnegotiated default mode.

IAC WILL NAOHTD
The data receiver requests or agrees to negotiate about output horizontal tab characters with the sender. In the case where agreement has been reached and in the absence of further subnegotiations, the data receiver alone is assumed to be handling output horizontal tab character considerations.

IAC WON'T NAOHTD
The data receiver refuses to negotiate about output horizontal tab characters, or demands a return to the unnegotiated default mode.

IAC SB NAOHTD DS <8-bit value> IAC SE
The data sender specifies, with the 8-bit value, which party should handle output horizontal tab characters and what their disposition should be. The code for DS is 1.

IAC SB NAOHTD DR <8-bit value> IAC SE
The data receiver specifies, with the 8-bit value, which party should handle output horizontal tab characters and what their disposition should be. The code for DR is 0.

3. Default

DON'T NAOHTD/WON'T NAOHTD. In the default absence of negotiations concerning which party, data sender or data receiver, is handling output horizontal tab character considerations, neither party is required to handle horizontal tab characters and neither party is prohibited from handling them; but it is appropriate if at least the data receiver handles horizontal tab character considerations, albeit primitively.

4. Motivation for the Option

Please refer to section 4 of the NAOL and of the NAOP Telnet option descriptions.

5. Description of the Option

The data sender and the data receiver use the 8-bit value along with the DS and DR SB commands as follows:

8-bit value	Meaning
0	Command sender suggests that he alone will handle horizontal tab characters, for the connection.
1 to 250	Command sender suggests that the other party alone should handle horizontal tab characters, but suggests that a delay of the indicated value be used. The value is the number of character-times to wait or number of NULs to insert in the data stream before sending the next data character.
251	Command sender suggests that the other party alone handle horizontal tabs, but suggests that each occurrence of the character be replaced by a space.
252	Command sender suggests that the other party alone handle horizontal tabs, but suggests that they be discarded.

253 Command sender suggests that the other party alone should handle horizontal tab characters, but suggests that tabbing be simulated.

254 Command sender suggests that the other party alone should handle horizontal tab characters, but suggests that waiting for a character to be transmitted (on the other simplex connection) before sending more data. Note that, due to the assynchrony of the two simplex connections, phase problems can occur with this option.

255 Command sender suggests that the other party alone should handle output horizontal tabs and suggests nothing about how it should be done.

The guiding rules are that:

(1) if neither data receiver nor data sender wants to handle output horizontal tab characters, the data receiver must do it, and

(2) if both data receiver and data sender wants to handle output horizontal tab characters, the data sender gets to do it.

The reasoning for the former rule is that if neither wants to do it, then the default in the NAOHTD option dominates. If both want to do it, the sender, who is presumed to have special knowledge about the data, should be allowed to do it, taking into account any suggestions the receiver may make.

Simulation is defined as the replacement of the horizontal tab character by enough spaces to move the printer head (or line-pointer) to the next horizontal tab stop.

Note that delays, controlled by the data sender, must consist of NUL characters inserted immediately after the horizontal tab character. This is necessary due to the assynchrony of network transmissions.

As with all option negotiations, neither party should suggest a state already in effect except to refuse to negotiate; changes should be acknowledged; and once refused, an option should not be resuggested until "something changes" (e.g., another process starts).

At any time, either party can disable further negotiation by giving the appropriate WON'T NAOHTD or DON'T NAOHTD command.